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=> s popoff, I?/au
L2          112 POPOFF, I?/AU

=> e l2
E1            3     L1ZRCL2/BI
E2            2     L1ZW10/BI
E3        34452 --> L2/BI
E4          638     L20/BI
E5           74     L200/BI
E6            6     L2000/BI
E7            3     L20000/BI
E8            6     L20001/BI
E9            1     L20003/BI
E10           1     L20004/BI
E11           3     L20005/BI
E12           1     L20006/BI

=> s l2 and antisense
L3           12 L2 AND ANTISENSE

=> d l3 bib abs 1-12

L3   ANSWER 1 OF 12  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN   2001:366166  BIOSIS
DN   PREV200100366166
TI   Antisense inhibition of e2f transcription factor 1 expression.
AU   Popoff, Ian; Brown-Driver, Vickie L. (1); Cowsert, Lex M.
CS   (1) Solana Beach, CA USA
     ASSIGNEE: Isis Pharmaceuticals, Inc.
PI   US 6187587 February 13, 2001
SO   Official Gazette of the United States Patent and Trademark Office Patents,
     (Feb. 13, 2001) Vol. 1243, No. 2, pp. No Pagination. e-file.
     ISSN: 0098-1133.
DT   Patent
LA   English
AB   Antisense compounds, compositions and methods are provided for
     modulating the expression of E2F transcription factor 1. The compositions
     comprise antisense compounds, particularly antisense
     oligonucleotides, targeted to nucleic acids encoding E2F transcription
     factor 1. Methods of using these compounds for modulation of E2F
     transcription factor 1 expression and for treatment of diseases associated
     with expression of E2F transcription factor 1 are provided.

L3   ANSWER 2 OF 12  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN   2001:292608  BIOSIS
DN   PREV200100292608
TI   Antisense inhibition of E2F transcription factor 3 expression.
AU   Popoff, Ian (1); Wyatt, Jacqueline
CS   (1) Encinitas, CA USA
     ASSIGNEE: Isis Pharmaceuticals, Inc.
PI   US 6165791 December 26, 2000
SO   Official Gazette of the United States Patent and Trademark Office Patents,
     (Dec. 26, 2000) Vol. 1241, No. 4, pp. No Pagination. e-file.
     ISSN: 0098-1133.
DT   Patent
LA   English
AB   Antisense compounds, compositions and methods are provided for
     modulating the expression of E2F transcription factor 3. The compositions
     comprise antisense compounds, particularly antisense
     oligonucleotides, targeted to nucleic acids encoding E2F transcription
     factor 3. Methods of using these compounds for modulation of E2F
```

transcription factor 3 expression and for treatment of diseases associated with expression of E2F transcription factor 3 are provided.

L3 ANSWER 3 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:257177 BIOSIS
DN PREV200000257177
TI Inhibition of PARP-2 expression by an **antisense** oligonucleotide improves colonic permeability in IL-10-- mice.
AU Jijon, Humberto B. (1); **Popoff, Ian J.**; Ma, Michael; Wessler, Andreas; Parsons, Howard G.; Jewell, Lawrence D.; Madsen, Karen L.
CS (1) Univ of Calgary, Calgary, AB Canada
SO Gastroenterology, (April, 2000) Vol. 118, No. 4 Suppl. 2 Part 1, pp. AGA A567. print..
Meeting Info.: 101st Annual Meeting of the American Gastroenterological Association and the Digestive Disease Week. San Diego, California, USA May 21-24, 2000 American Gastroenterological Association
. ISSN: 0016-5085.
DT Conference
LA English
SL English

L3 ANSWER 4 OF 12 MEDLINE
AN 2002184354 IN-PROCESS
DN 21914281 PubMed ID: 11916922
TI Specific Inhibition of PTEN Expression Reverses Hyperglycemia in Diabetic Mice.
AU Butler Madeline; McKay Robert A; **Popoff Ian J**; Gaarde William A; Witchell Donna; Murray Susan F; Dean Nicholas M; Bhanot Sanjay; Monia Brett P
CS Isis Pharmaceuticals, Carlsbad, California.
SO DIABETES, (2002 Apr) 51 (4) 1028-34.
Journal code: 0372763. ISSN: 0012-1797.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Abridged Index Medicus Journals; Priority Journals
ED Entered STN: 20020403
Last Updated on STN: 20020403
AB Signaling through the phosphatidylinositol 3'-kinase (PI3K) pathway is crucial for metabolic responses to insulin, and defects in PI3K signaling have been demonstrated in type 2 diabetes. PTEN (MMAC1) is a lipid/protein phosphatase that can negatively regulate the PI3K pathway by dephosphorylating phosphatidylinositol (3,4,5)-triphosphate, but it is unclear whether PTEN is physiologically relevant to insulin signaling in vivo. We employed an **antisense** oligonucleotide (ASO) strategy in an effort to specifically inhibit the expression of PTEN. Transfection of cells in culture with ASO targeting PTEN reduced PTEN mRNA and protein levels and increased insulin-stimulated Akt phosphorylation in alpha-mouse liver-12 (AML12) cells. Systemic administration of PTEN ASO once a week in mice suppressed PTEN mRNA and protein expression in liver and fat by up to 90 and 75%, respectively, and normalized blood glucose concentrations in db/db and ob/ob mice. Inhibition of PTEN expression also dramatically reduced insulin concentrations in ob/ob mice, improved the performance of db/db mice during insulin tolerance tests, and increased Akt phosphorylation in liver in response to insulin. These results suggest that PTEN plays a significant role in regulating glucose metabolism in vivo by negatively regulating insulin signaling.

L3 ANSWER 5 OF 12 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 2002:290943 SCISEARCH
GA The Genuine Article (R) Number: 537BR
TI Specific inhibition of PTEN expression reverses hyperglycemia in diabetic

mice

AU Butler M; McKay R A; **Popoff I J**; Gaarde W A; Witchell D; Murray S F; Dean N M; Bhanot S; Monia B P (Reprint)

CS ISIS Pharmaceut, 2292 Faraday Ave, Carlsbad, CA 92008 USA (Reprint); ISIS Pharmaceut, Carlsbad, CA 92008 USA

CYA USA

SO DIABETES, (APR 2002) Vol. 51, No. 4, pp. 1028-1034.
Publisher: AMER DIABETES ASSOC, 1660 DUKE ST, ALEXANDRIA, VA 22314 USA.
ISSN: 0012-1797.

DT Article; Journal

LA English

REC Reference Count: 31

AB *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
zSignaling through the phosphatidylinositol 3'-kinase (PI3K) pathway is crucial for metabolic responses to insulin, and defects in PI3K signaling have been demonstrated in type 2 diabetes. PTEN (MMAC1.) is a lipid/protein phosphatase that can negatively regulate the PI3K pathway by dephosphorylating phosphatidylinositol (3,4,5)-triphosphate, but it is unclear whether PTEN is physiologically relevant to insulin signaling in vivo. We employed an **antisense** oligonucleotide (ASO) strategy in an effort to specifically inhibit the expression of PTEN. Transfection of cells in culture with ASO targeting PTEN reduced PTEN mRNA and protein levels and increased insulin-stimulated Akt phosphorylation in alpha-mouse liver-12 (AAL12) cells. Systemic administration of PTEN ASO once a week in mice suppressed PTEN mRNA and protein expression in liver and fat by up to 90 and 75%, respectively, and normalized blood glucose concentrations in db/db and ob/ob mice. Inhibition of PTEN expression also dramatically reduced insulin concentrations in ob/ob mice, improved the performance of db/db mice during insulin tolerance tests, and increased Akt phosphorylation in liver in response to insulin. These results suggest that PTEN plays a significant role in regulating glucose metabolism in vivo by negatively regulating insulin signaling.

L3 ANSWER 6 OF 12 SCISEARCH COPYRIGHT 2002 ISI (R)

AN 2000:575499 SCISEARCH

GA The Genuine Article (R) Number: 313NK

TI Specific inhibition of PTEN expression with an **antisense** oligonucleotide normalizes plasma glucose in db/db mice

AU McKay R A (Reprint); Butler M; **Popoff I J**; Gaarde W; Witchell D; Dean N M; Monia B P

SO DIABETES, (MAY 2000) Vol. 49, Supp. [1], pp. 207-207.
Publisher: AMER DIABETES ASSOC, 1660 DUKE ST, ALEXANDRIA, VA 22314.
ISSN: 0012-1797.

DT Conference; Journal

FS LIFE; CLIN

LA English

REC Reference Count: 0

L3 ANSWER 7 OF 12 SCISEARCH COPYRIGHT 2002 ISI (R)

AN 2000:531769 SCISEARCH

GA The Genuine Article (R) Number: 309RU

TI Inhibition of PARP-2 expression by an **antisense** oligonucleotide improves colonic permeability in IL10(-/-) mice.

AU Jijon H B (Reprint); **Popoff I J**; Ma M; Wessler A; Parsons H G; Jewell L D; Madsen K L

CS UNIV CALGARY, CALGARY, AB, CANADA; ISIS PHARMACEUT, SAN DIEGO, CA; UNIV ALBERTA, EDMONTON, AB, CANADA

CYA CANADA; USA

SO GASTROENTEROLOGY, (APR 2000) Vol. 118, No. 4, Part 1, Supp. [2], pp. 2964-2964.
Publisher: W B SAUNDERS CO, INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399.

ISSN: 0016-5085.
DT Conference; Journal
FS LIFE; CLIN
LA English
REC Reference Count: 0

L3 ANSWER 8 OF 12 CA COPYRIGHT 2002 ACS
AN 136:241701 CA
TI **Antisense** modulation of E2F transcription factor 2 expression
IN **Popoff, Ian**; Wyatt, Jacqueline R.
PA Isis Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020551	A1	20020314	WO 2001-US28202	20010907

PI WO 2002020551
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-658679 A 20000908
AB **Antisense** compds., compns. and methods are provided for modulating the expression of E2F transcription factor 2. The compns. comprise **antisense** compds., particularly **antisense** oligonucleotides, targeted to nucleic acids encoding E2F transcription factor 2. Methods of using these compds. for modulation of E2F transcription factor 2 expression and for treatment of diseases assocd. with expression of E2F transcription factor 2 provided.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 12 CA COPYRIGHT 2002 ACS
AN 135:236463 CA
TI **Antisense** modulation of poly(ADP-ribose) polymerase (PARP) expression, and therapeutic use
IN **Popoff, Ian**; Cowsert, Lex M.
PA Isis Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 168 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001064955	A1	20010907	WO 2001-US6572	20010301

PI WO 2001064955
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-517467 A 20000302
AB **Antisense** compds., compns. and methods are provided for modulating the expression of human PARP. The compns. comprise **antisense** compds., particularly **antisense** oligonucleotides, targeted to nucleic acids encoding human PARP. Methods of using these compds. for modulation of human PARP expression and for treatment of diseases assocd. with expression of human PARP are provided.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 12 CA COPYRIGHT 2002 ACS
AN 134:141777 CA
TI **Antisense** oligonucleotide inhibition of E2F transcription factor 1 expression
IN **Popoff, Ian**; Brown-driver, Vickie L.; Cowsert, Lex M.
PA Isis Pharmaceuticals, Inc., USA
SO U.S., 40 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6187587	B1	20010213	US 2000-517584	20000302
WO 2001064706	A1	20010907	WO 2001-US6544	20010301

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-517584 A 20000302
AB **Antisense** compds., compns. and methods are provided for modulating the expression of E2F transcription factor 1. The compns. comprise **antisense** compds., particularly **antisense** oligonucleotides, targeted to nucleic acids encoding E2F transcription factor 1. Chimeric oligonucleotides contg. 2'-O-methoxyethylribonucleotides and 5-Me cytosine were tested, and up to 84% inhibition of E2F transcription factor 1 was obsd. Methods of using these compds. for modulation of E2F transcription factor 1 expression and for treatment of diseases assocd. with expression of E2F transcription factor 1 are provided.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 12 CA COPYRIGHT 2002 ACS
AN 134:67137 CA
TI **Antisense** inhibition of transcription factor E2F-3 expression
IN **Popoff, Ian**; Wyatt, Jacqueline
PA Isis Pharmaceuticals, Inc., USA
SO U.S., 41 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6165791	A	20001226	US 2000-513729	20000224
WO 2001062973	A1	20010830	WO 2001-US5484	20010221

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-513729 A 20000224

AB **Antisense** compds., compns. and methods are provided for modulating the expression of E2F transcription factor 3. The compns. comprise **antisense** compds., particularly **antisense** oligonucleotides, targeted to nucleic acids encoding E2F transcription factor 3. Methods of using these compds. for modulation of E2F transcription factor 3 expression and for treatment of diseases assocd. with expression of E2F transcription factor 3 are provided. Thus, 20-residue, phosphorothioate-linked, chimeric oligonucleotides targeting the 5'-UTR, coding region, or 3'-UTR of transcription factor E2F-3 mRNA were prepd. The oligonucleotides consisted of a 10-residue core DNA flanked on both sides by 2'-O-(2-methoxyethyl)ribonucleosides. In in vitro studies with these **antisense** oligonucleotides, up to 80% inhibition of transcription factor E2F-3 gene expression was obsd.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 12 CA COPYRIGHT 2002 ACS
AN 133:291108 CA
TI **Antisense** modulation of p38 mitogen activated protein kinase expression
IN Monia, Brett P.; Gaarde, William A.; Nero, Pamela S.; Mckay, Robert; **Popoff, Ian**
PA Isis Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000059919	A1	20001012	WO 2000-US8794	20000404
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6140124	A	20001031	US 1999-286904	19990406
EP 1165593	A1	20020102	EP 2000-920053	20000404
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRAI US 1999-286904 A 19990406
WO 2000-US8794 W 20000404

AB **Antisense** oligonucleotides and methods for the treatment of diseases or conditions amenable to treatment through modulation of expression of a gene encoding a p38 mitogen-activated protein kinase (p38 MAPK) are provided. Thus, chimeric **antisense** oligonucleotides directed to coding or noncoding regions of the p38.alpha. or p38.beta. nucleic acids were applied to mammalian cells in culture. ISIS 100872

inhibited p38.alpha. expression by 82% and p38.beta. expression by 8% at 100 nM, while ISIS 107871 inhibited p38.alpha. by 16% and p38.beta. by 86% at the same concn.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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